What is claimed is:

1. A method of laser machining comprising:
impinging a focused laser beam upon a surface of a work piece; and
directing a process gas stream against the surface of the work piece, wherein the process gas stream comprises oxygen, hydrogen, and at least one inert gas.

2. The method of claim 1, wherein the ratio of oxygen to hydrogen in the process gas is hypostoichiometric with respect to the reaction $2H_2 + O_2 => H_2O$.

3. The method of claim 1, further comprising selecting a hypostoichiometric ratio of oxygen to hydrogen in the process gas in order to determine the degree of reductive effect of the process gas.

4. The method of claim 1, wherein the at least one inert gas is selected from the group consisting of nitrogen, argon and helium.

5. The method of claim 1, wherein the process gas comprises between about 0.1% and about 30% by volume of oxygen.

6. The method of claim 1, wherein the process gas comprises between about 0.5% and about 25% by volume of oxygen.

7. The method of claim 1, wherein the process gas comprises between about 1% and about 20% by volume of oxygen.

8. The method of claim 1, wherein the process gas comprises between about 1% and about 70% by volume of hydrogen.

9. The method of claim 1, wherein the process gas comprises between about 5% and about 60% by volume of hydrogen.

10. The method of claim 1, wherein the process gas comprises between about 10% and about 50% by volume of hydrogen.

11. The method of claim 1, wherein the process gas is mixed from a gas mixture comprising hydrogen and air; or hydrogen, an inert gas, and air.

12. The method of claim 1, wherein the method of laser machining comprises a method of laser beam fusion cutting, and wherein the process gas comprises more than about 10% by volume of at least one gas selected from the group consisting of nitrogen and argon.

13. The method of claim 12, wherein the process gas comprises between about 20% and about 98% by volume of at least one gas selected from the group consisting of nitrogen and argon.

14. The method of claim 12, wherein the process gas comprises between about 30% and about 95% by volume of at least one gas selected from the group consisting of nitrogen and argon.

15. The method of claim 1, wherein the method of laser machining comprises a method of laser beam fusion cutting, and wherein the process gas consists essentially of nitrogen, oxygen, and hydrogen; or argon, oxygen, and hydrogen; or nitrogen, argon, oxygen, and hydrogen.

16. The method of claim 1, wherein the process gas stream is directed against the surface of the work piece by a laser machining apparatus, and wherein the process gas is supplied premixed to the laser machining apparatus.

17. The method of claim 1, wherein the process gas stream is directed against the surface of the work piece by a laser machining apparatus having at least one of a welding nozzle and a cutting nozzle, and wherein a plurality of individual components of the process gas are mixed in the laser machining apparatus before reaching the at least one nozzle.

18. The method of claim 1, wherein the process gas stream is directed against the surface of the work piece by a laser machining apparatus having at least one of a welding nozzle and a cutting nozzle, and wherein a plurality of individual components of the process gas are swirled in the at least one nozzle.

19. The method of claim 1, wherein the method of laser machining comprises a method of laser beam fusion cutting, and wherein the work piece is composed of a material that cannot be cut using a laser beam flame cutting process.

20. The method of claim 1, wherein the method of laser machining comprises a method of laser beam welding, and wherein the work piece is composed of a coated material.

21. The method of claim 20, wherein the coated material is selected from the group consisting of steel and galvanized steel.

22. A process gas for use in laser machining processes, comprising oxygen, hydrogen, and at least one inert gas.

23. The process gas of claim 22, wherein the ratio of oxygen to hydrogen in the process gas is hypostoichiometric with respect to the reaction $2\ H_2 + O_2 \Rightarrow 2\ H_2O$.

24. The process gas of claim 22, wherein the at least one inert gas is selected from the group consisting of nitrogen, argon, and helium.

25. The process gas of claim 22, wherein the process gas comprises between about 0.1% and about 30% by volume of oxygen.

26. The process gas of claim 25, wherein the process gas comprises between about 0.5% and about 25% by volume of oxygen.

27. The process gas of claim 25, wherein the process gas comprises between about 1% and about 20% by volume of oxygen.

28. The process gas of claim 22, wherein the process gas comprises between about 1% and about 70% by volume of hydrogen.

29. The process gas of claim 28, wherein the process gas comprises between about 5% and about 60% by volume of hydrogen.

30. The process gas of claim 28, wherein the process gas comprises between about 10% and about 50% by volume of hydrogen.

31. The process gas of claim 22, wherein the process gas comprises more than about 10% by volume of at least one gas selected from the group consisting of nitrogen and argon.

32. The process gas of claim 22, wherein the process gas comprises between about 20% and about 98% by volume of at least one gas selected from the group consisting of nitrogen and argon.

33. The process gas of claim 32, wherein the process gas comprises between about 30% and about 95% by volume of at least one gas selected from the group consisting of nitrogen and argon.

34. A process gas for use in laser machining processes, consisting essentially of:

nitrogen, oxygen, and hydrogen; or
argon, oxygen, and hydrogen; or
nitrogen, argon, oxygen, and hydrogen.

35. The process gas of claim 34, wherein the ratio of oxygen to hydrogen in the process gas is hypostoichiometric with respect to the reaction $2H_2 + O_2 \Rightarrow 2\ H_2O$.

36. The process gas of claim 34, wherein the process gas consists essentially of between about 0.1% and about 30% by volume of oxygen.

37. The process gas of claim 34, wherein the process gas consists essentially of between about 1% and about 70% by volume of hydrogen.

38. The process gas of claim 34, wherein the process gas consists essentially of more than about 10% by volume of nitrogen.

39. The process gas of claim 34, wherein the process gas consists essentially of more than about 10% by volume of argon.